

BLUNT FORCE INJURIES

Def – caused by blunt object striking the body (active mechanism) or impact of the body against a blunt object or surface (passive mechanism).

BLUNT FORCE INJURIES

Severity, extent and appearance of injury depends on:

- nature of weapon (flat surface, narrow objects, easily deformed object, flexible cylindrical object),
- amount of body surface, region of the body,
- amount of force,
- time

BLUNT FORCE INJURIES

Any injury should be describe in detail according to:

- its localization (anatomical posture of the body),
- its type, size, color (dating of bruises),
- signs of healing, signs of treatment (sutures),
- concomitant injuries in deeper soft tissues,

- photographs should be taken by the official photographer, even a video film,
- photos are only an aid to the written record, they cannot replace one

BLUNT FORCE INJURIES

ABRASIONS

CONTUSIONS - BRUISES

LACERATIONS

QUESTIONS TO BE ANSWERED

- Are there any external or / and internal injuries?
- What is the kind of these injuries?
- How were these injuries caused?
- What kind of tool were they caused with?
- Is there any connection between these injuries and the cause of death?

ABRASIONS

- superficial layers of the skin are damaged (sliding motion, firm downward pressure on the skin)
- superficial injury - does not extend through the full skin thickness and into the underlying tissues,

- antemortem – reddish-brown, postmortem – yellowish,
- easily becomes dry
- present at the precise point of impact,
- it may exhibit a pattern of the object (motor car tire, shoe) or intermediary clothing (wool, ligature mark),
- may show a certain direction (series of thin, linear parallel abrasions, there may be a number of very small curled skin tags at the point where the sliding ceased),
- it may suggest severe internal injury (head!)
- usually heals without scarring.

CONTUSIONS - BRUISES

- when force, applied to the skin, is sufficient to rupture the underlying small veins, with subsequent escape of blood into the surrounding loose connective tissue,
- site of contusion does not necessarily correspond with the impact point - in a deep-seated bruise the blood may move along several tissue planes
- seldom only exhibits a pattern
- some objects (police baton) - produce a bruise quite unlike that of any other - two parallel lines of bruising separated by an uninjured area
- may be mistaken with an area of post mortem hypostasis (lividities) – incision!
- sites where bruising is of special interest:
 - neck
 - inner aspect of the arms - when a person requires to be forcibly restrained (finger tip bruising),
 - inner aspect of the thighs in sexual assaults,
 - scrotum
- When was the injury caused?
- It is not easy to date or time an injury. There are a few microscopic enzyme tests which can be employed - but they are more useful only in the first few hours after the injury was sustained,
- the rule-of-thumb methods - color of the changes in bruises, or the vital tissue reaction that develops around skin wounds (healing, inflammation) or healing fractured bones.

How much force was used ?

- The answers just cannot be expressed in mathematical terms. The best is the use of four possibilities:
 - a small degree
 - a moderate degree,
 - a considerable degree,
 - and a severe degree of force.

LACERATIONS

- when blunt force injury applied to the skin operates in two directions at the same time - downward component which crushes the skin and the underlying structures and a forward component which applies a stretching or shearing force to the skin,

Lacerations are caused by one of three ways:

- moving object strikes a stationary victim- hammer, axe, bottle strike or a kick with a heavily shod foot,
- moving victim strikes a stationary object - cases of falling down or colliding with e.g. furniture
- moving victim strikes a moving object - car accidents

- usually of an irregular shape, sometimes linear, L-shaped, V-shaped,
- edges are ragged with bruising and thin abrasion around the edges,
- when a laceration occurs close to an underlying bone - it may present as a regular wound (i.e. incised wound)
- strands of „bridging” tissues inside laceration!!**

INCISED (CUT) WOUNDS

Skin is cut with sharp-edged instrument - a knife, a razor, sharp piece of glass or metal,

- the length of the wound is greater than its depth,
- there is a profuse haemorrhage,
- there is a little opportunity for infection

- suicidal wound - neck, wrist (hesitation or tentative marks)
- homicidal wound – single, deep wound, signs of victim’s resistance - abrasions, bruises, other torture marks

PENETRATING WOUNDS

- stab wounds or penetrating wounds
- caused by a sharp-edged, sharply pointed knife,
- its depth is greater than its length
- it results an severe internal injury
- the length of the wound relates to the width of the weapon
- the shape of the wound may represent the shape of the blade (single or double-edged blade).

DEFENCE INJURIES (PROTECTIVE INJURIES)

- Usually the victim receives incised wounds, stab wounds, bruises or other less serious injuries to his forearm, hands or wrist (on the part of the body which has been instinctively raised)